

Abstract of the Invention

A system and method is provided for applying a developer to a photoresist material layer disposed on a semiconductor substrate. The developer system and method employ a developer plate having a plurality of apertures for dispensing developer. Preferably, the developer plate has a bottom surface with a shape that is similar to the wafer. The developer plate is disposed above the wafer and substantially and/or completely surrounds the top surface of the wafer during application of the developer. A small gap is formed between the wafer and the bottom surface of the developer plate. The wafer and the developer plate form a parallel plate pair, such that the gap can be made small enough so that the developer fluid quickly fills the gap. A differential voltage is applied to the developer plate and the wafer causing an electric field to be formed in the gap. Transportation of negatively charge photoresist material is facilitated by exposure to the electric field during the development process.